



Description

Bulletin 871P rectangular inductive proximity sensors are self-contained, solid-state devices designed to sense the presence of ferrous and nonferrous metal objects without touching them.

Each switch is contained in a rectangular, self-extinguishing, glass-reinforced polyester body which meets NEMA 1, 2, 3, 4X, 12, 13, IP65 (IEC 529) enclosure standards.

These devices are available in top, front, left and right sensing models. Connection options include 2.5m (8ft) cable (with threaded conduit opening) and mini and micro quick-disconnect.

Features

- Cable or quick-disconnect styles
- Short-circuit protection
- Transient noise protection
- False pulse protection

Styles

AC 2-Wire page 2–132

Accessories

Quick-Disconnect Cables . . . page 5–1

General Information

Metric/English
Conversion Chart page 11–1



871P AC Cable Style
page 2-133



871P AC Mini
Quick-Disconnect Style
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871P AC Micro
Quick-Disconnect Style
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Specifications

Load Current	≤0.5A
Inrush Current	≤5A for 1 cycle
Leakage Current	≤2mA
Operating Voltage	40–132V AC
Supply Current (minimum)	4mA
Voltage Drop	≤10V at ≥50mA ≤20V at <50mA
Repeatability	≤5%
Hysteresis	15% maximum
False Pulse Protection	Incorporated
Transient Noise Protection	Incorporated
Short Circuit Protection	Incorporated
Approvals	CE marked for all applicable directives
Enclosure	NEMA 1, 2, 3, 4X, 12, 13, IP65 (IEC 529) Self-extinguishing glass reinforced polyester
Connections	Cable: 2.5m (8ft) length 2-conductor #18 AWG PVC with threaded conduit opening Quick-Disconnect: 3-pin mini style 3-pin micro style
LED	Red: Output Energized
Operating Temperature	–25°C to +75°C (–13°F to +167°F)
Shock	30g, 11ms
Vibration	55Hz, 1mm amplitude, 3 planes

Correction Factors

Target Material	Correction Factor
Steel	1.0
Stainless Steel	0.7–0.8
Brass	0.4–0.5
Aluminum	0.3–0.4
Copper	0.2–0.3

Features

- 2-wire operation
- 2-conductor or 3-pin connection
- 40–132V AC
- Normally open output
- Short circuit, false pulse and transient noise protection
- CE marked for all applicable directives

Selection Guide

Sensing Direction	Nominal Sensing Distance mm (inches)	Shielded	Inside Thread Type	Output Configuration	Switching Frequency (Hz)	Catalog Number Cable Style
Top	12.5 (0.49)	N	1/2–14 NPSC x 0.5 Deep	N.O.	16	871P–E13GCT
			ISO 20–1.5 x 12.5 Deep			871P–E13GCT–S6
Front			1/2–14 NPSC x 0.5 Deep			871P–E13GCF
			ISO 20–1.5 x 12.5 Deep			871P–E13GCF–S6
Left			1/2–14 NPSC x 0.5 Deep			871P–E13GCL
			ISO 20–1.5 x 12.5 Deep			871P–E13GCL–S6
Right			1/2–14 NPSC x 0.5 Deep			871P–E13GCR
			ISO 20–1.5 x 12.5 Deep			871P–E13GCR–S6

Sensing Direction	Nominal Sensing Distance mm (inches)	Shielded	Output Configuration	Switching Frequency (Hz)	Catalog Number	
					Mini QD Style	Micro QD Style
Top	12.5 (0.49)	N	N.O.	16	871P-E13GRT	871P-E13GRT-R3
Front					871P-E13GRF	871P-E13GRF-R3
Left					871P-E13GRL	871P-E13GRL-R3
Right					871P-E13GRR	871P-E13GRR-R3
Recommended Standard QD Cordset (–6F = 1.8m (6ft), –2 = 2m (6.5ft))						889R-F3ACA-2

QD Cordsets and Accessories

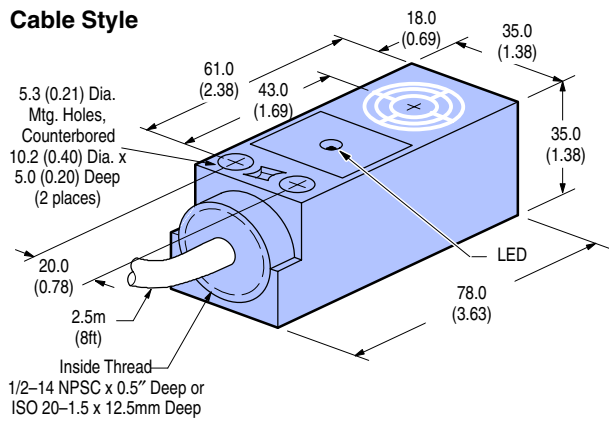
Description	Page Number
Other Cordsets Available	5–8, 5–44
Terminal Chambers	5–19

Inductive Proximity Sensors

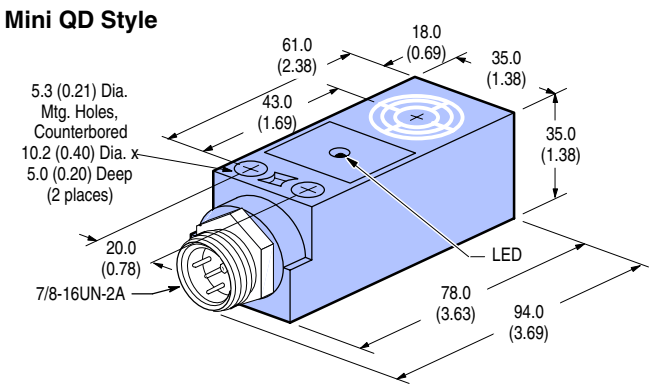
871P Rectangular 2-Wire AC

Dimensions—mm (inches)

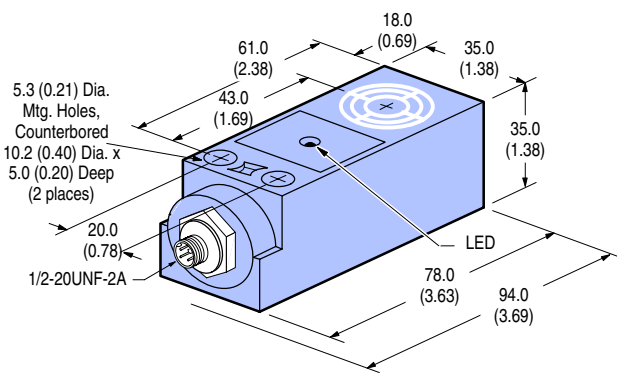
Cable Style



Mini QD Style

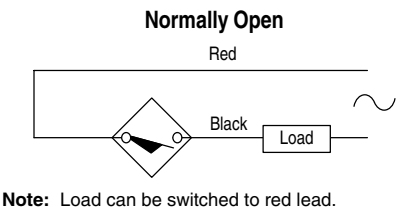


Micro QD Style

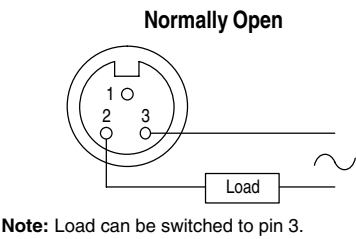


Wiring Diagram

Cable Style



Mini QD Style



Micro QD Style

